

Meeting the Safety Challenge

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Administrator

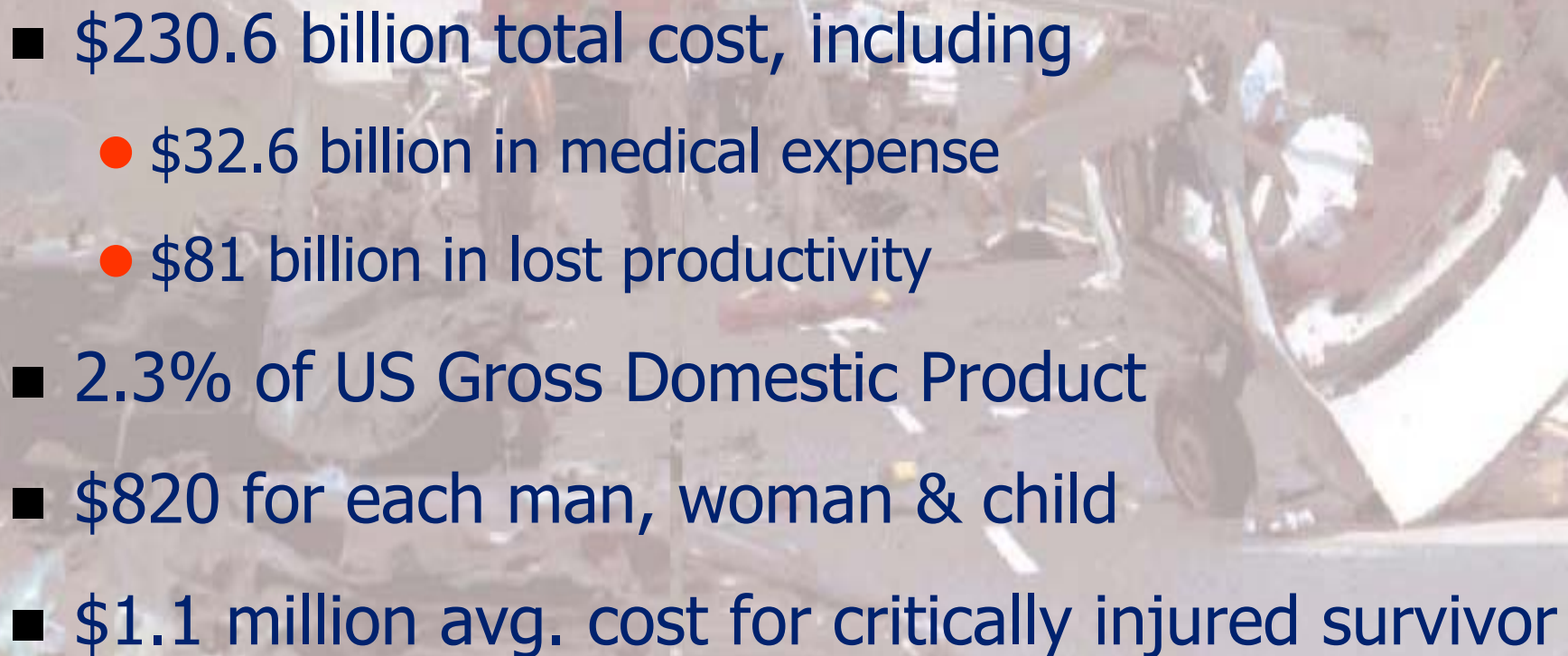
National Highway Traffic Safety Administration



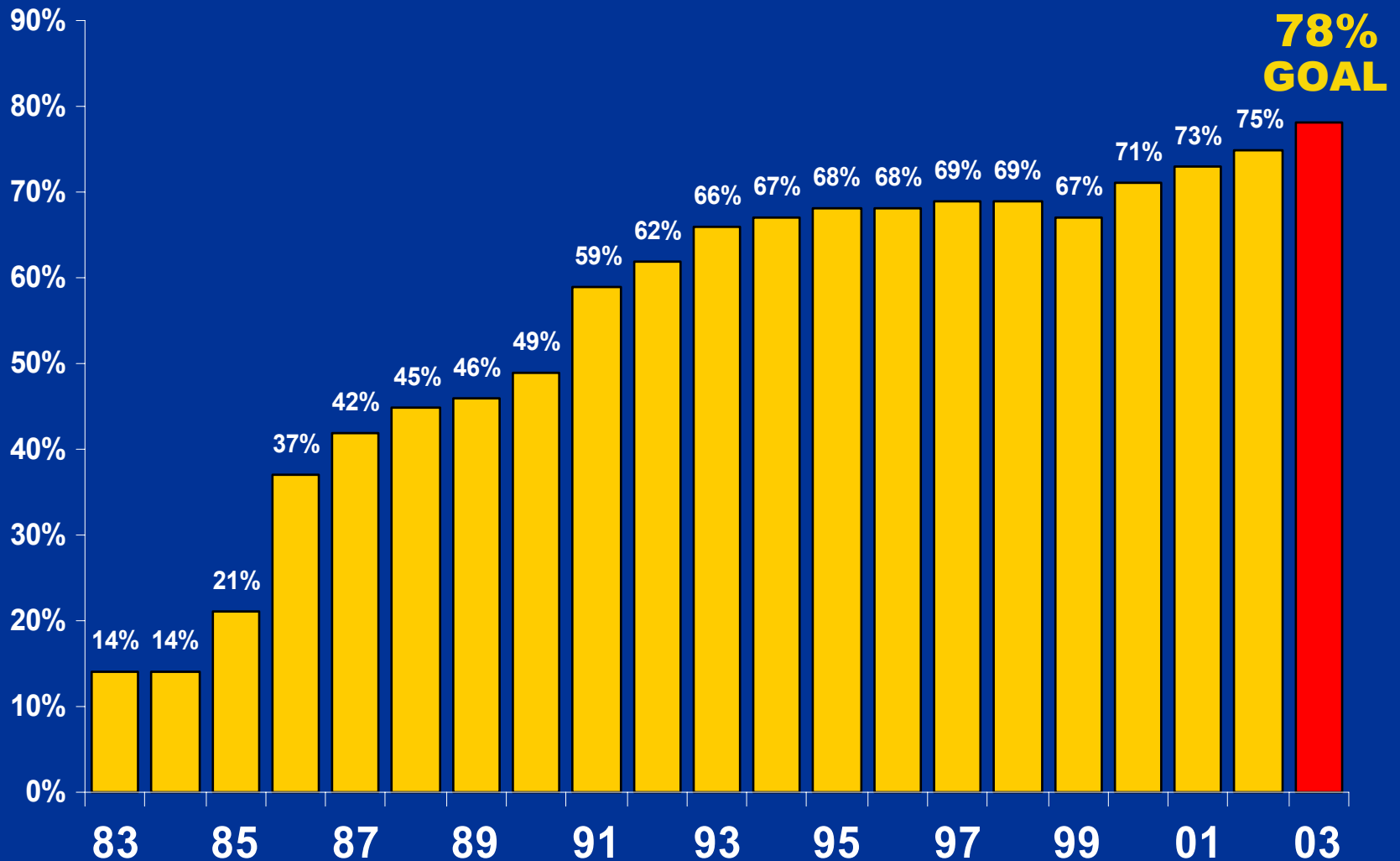
Persons Killed and Injured and Number of Crashes

	Year		% Change
	2000	2001	
Persons Killed	41,945	42,116	+0.4%
Persons Injured	3,189,000	<i>3,033,000</i>	-4.9%

Economic Cost of Crashes 2000

- 
- \$230.6 billion total cost, including
 - \$32.6 billion in medical expense
 - \$81 billion in lost productivity
 - 2.3% of US Gross Domestic Product
 - \$820 for each man, woman & child
 - \$1.1 million avg. cost for critically injured survivor

Safety Belt Use Rates 1983-2003



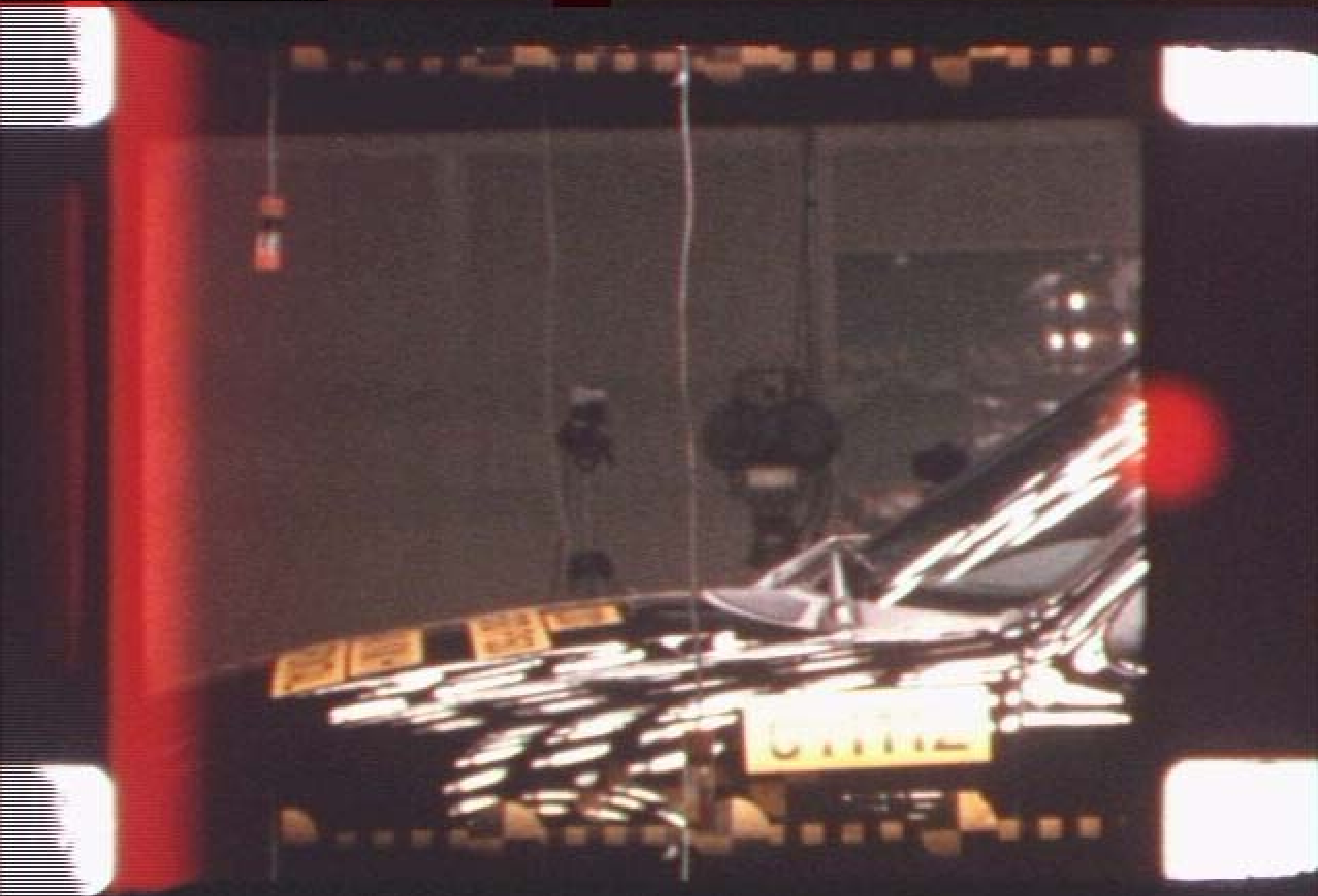
Failure to Use Safety Belts

- 9,200 fatalities
- 143,000 people injured
- \$26 billion in costs incurred

Safety Belt Benefits

- **For each 1% increase in safety belt use:**
 - 2.8 million more people buckling up
 - 270 lives saved
 - \$800 million cost saved
 - Reduce severity of 6,400 serious injuries
- **Belt use at 90%:**
 - 6,600 lives saved each year

**AVI file for
Unbelted 50th Percentile
Male Driver**



Safety

**Child Seat
Tether Anchors**

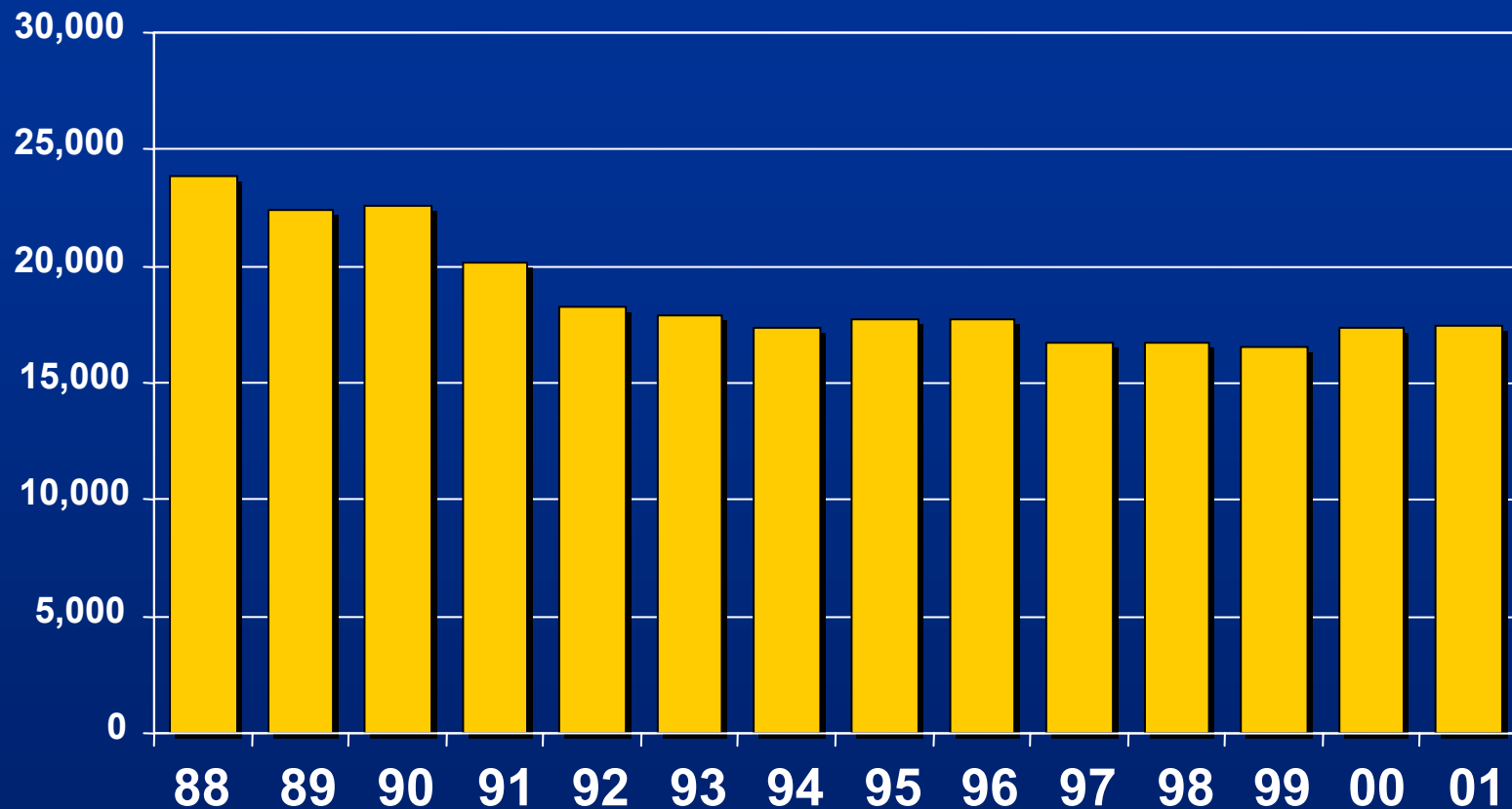
Safety Belts

Belt-Minder



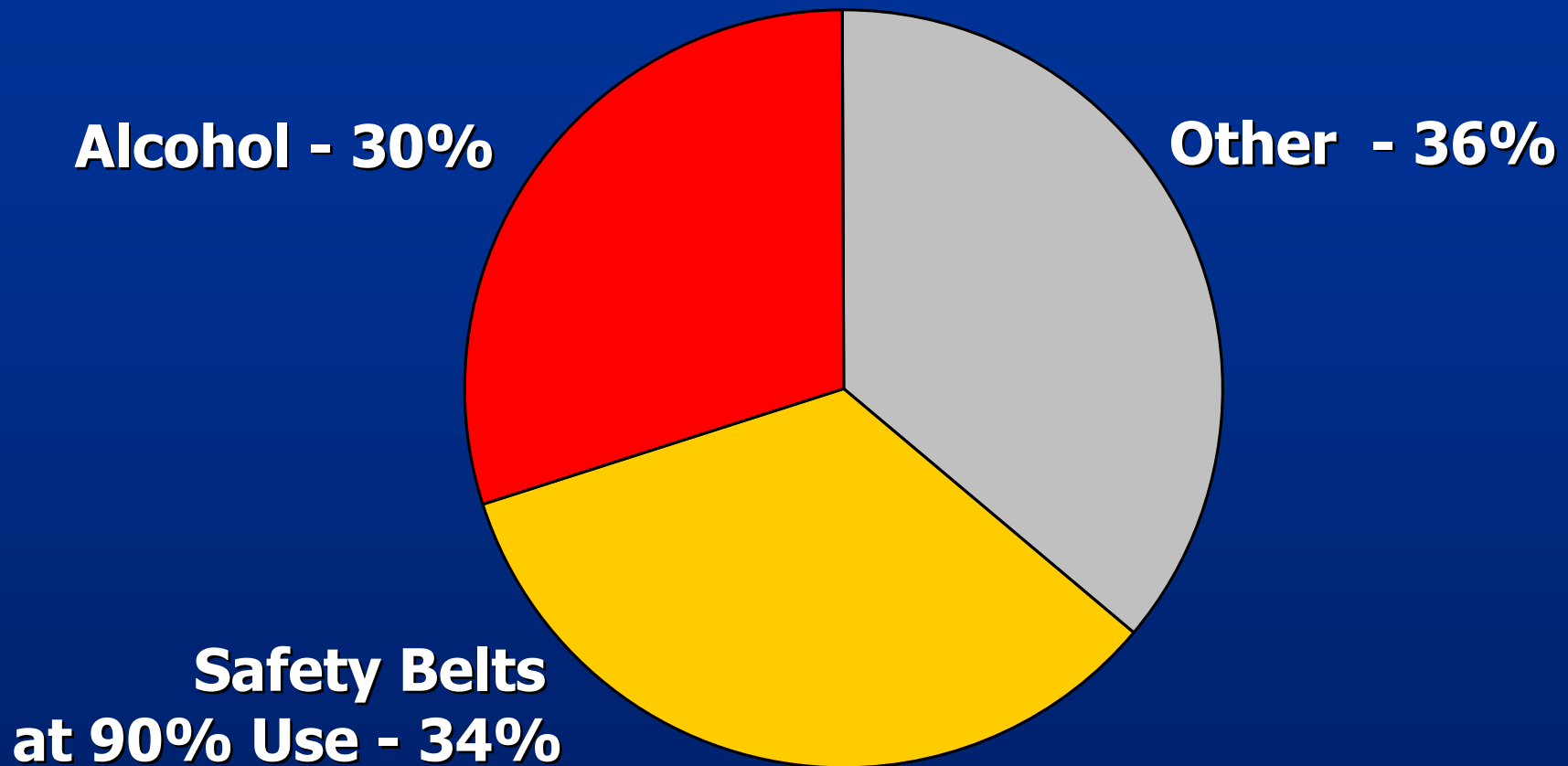
Air Bags

Persons Killed in Alcohol-Related Traffic Crashes by Year



Source: FARS

Predicted Lives Saved by Countermeasure



Touch Screen Multifunction Display



Vehicle Safety Priorities



Compatibility

Rollover prevention & protection

Advanced Air Bags

Side Impact

Offset Frontal

Advanced Dummies

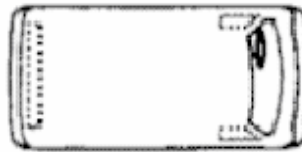
Rear Impact



Priority: Vehicle Compatibility

Driver Fatality Ratios in Frontal Crashes

Full Size Van



1:6.0

**Full Size
Pickup**



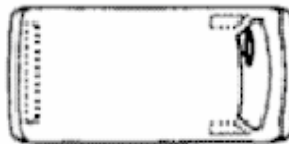
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**Sport Utility
Vehicle (all)**



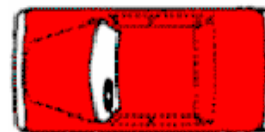
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Minivan



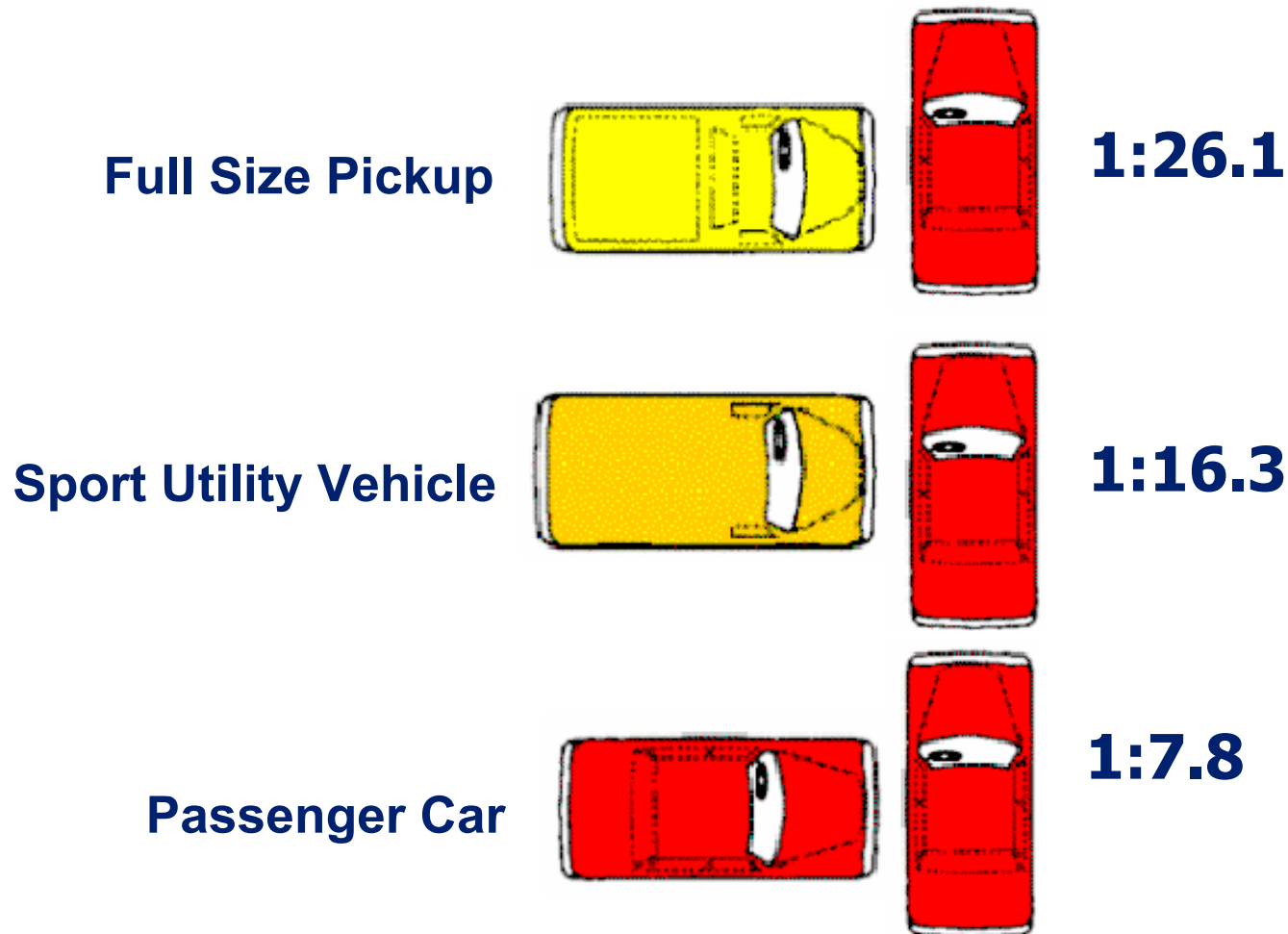
1:2.6

**Compact
Pickup**



1:2.6

Driver Fatality Ratios in Near-Side Crashes



Compatibility Issues

- **Structural Engagement (Geometry)**
- **Energy Management (Stiffness & Crush Force)**



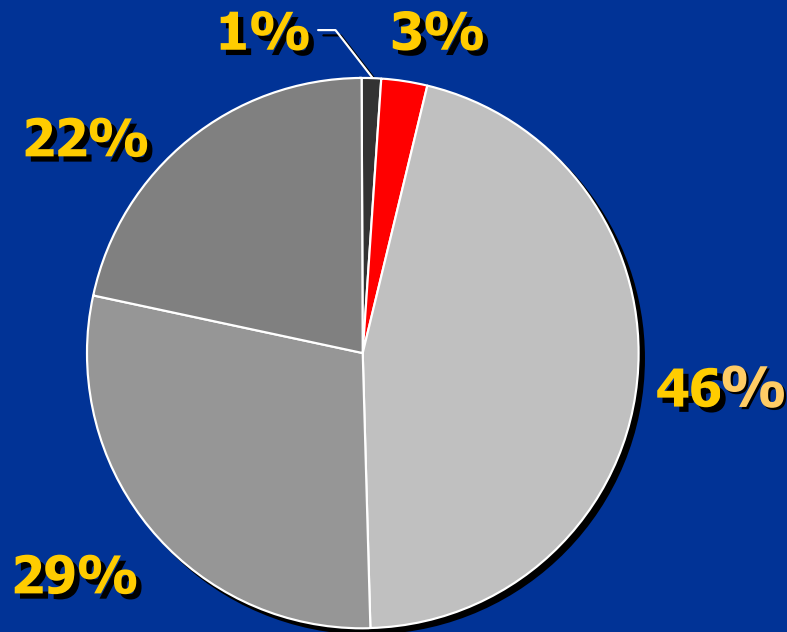
Priority: Rollover



Vehicles in Crashes and Fatalities by Type of Collision

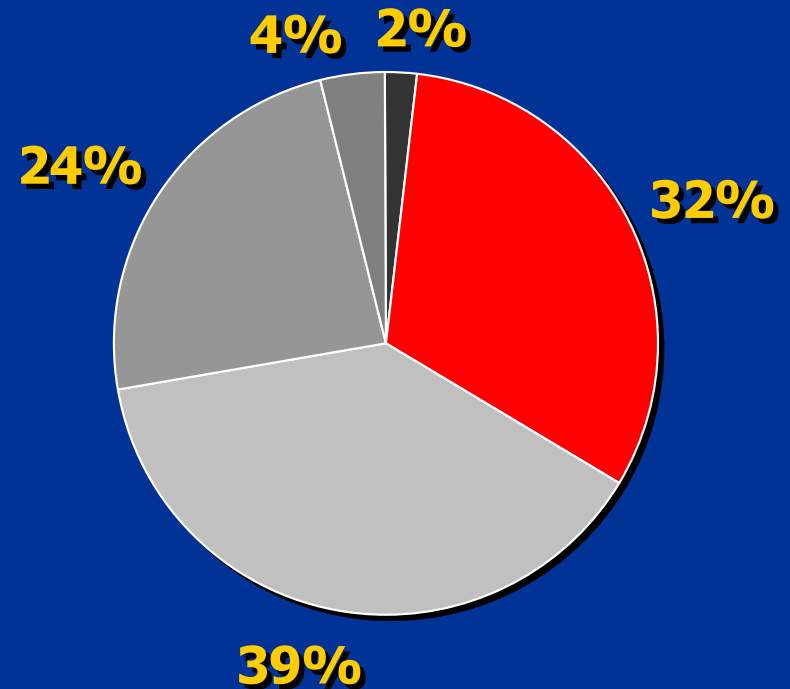
Passenger Vehicles in Crashes 2001

Approx. 10.7 million vehicles involved



Passenger Vehicle Occupant Fatalities 2001

31,910 total occupants killed

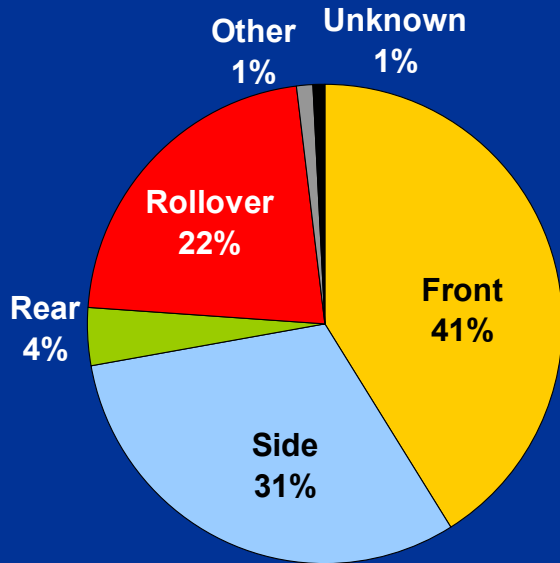


■ Rollover ■ Front ■ Side ■ Rear ■ Other

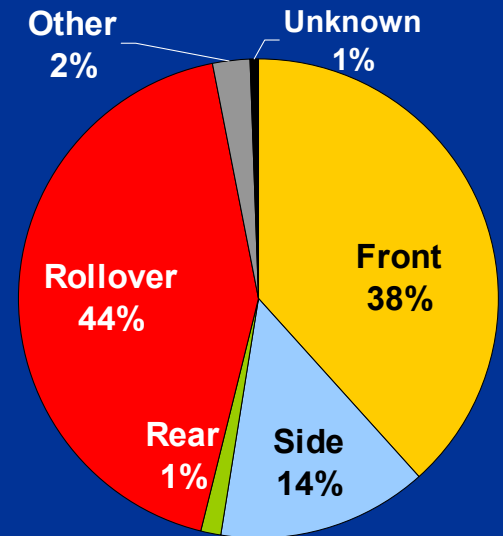
Occupant Fatalities in Rollover Crashes, 2001

Rate per 100,000 Registered Vehicles

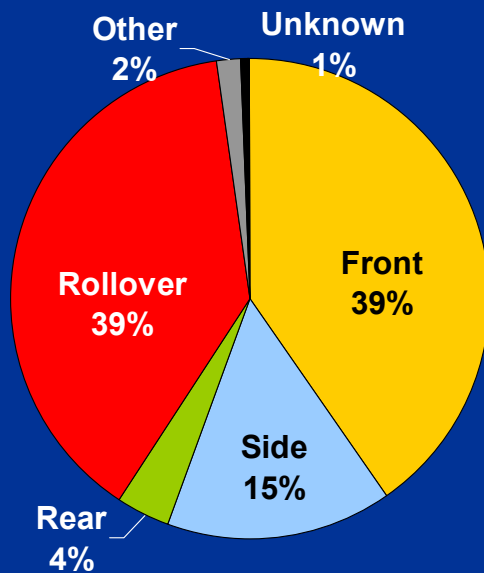
	Deaths	Rate
■ Passenger cars	4,549	3.53
■ SUVs	2,142	9.90
■ Pickup trucks	2,643	6.97
■ Vans	784	4.33
■ Total	10,118	4.90



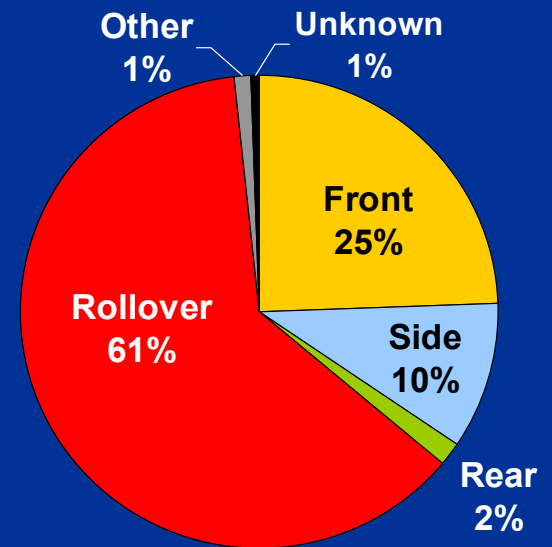
Passenger Cars



Pickups

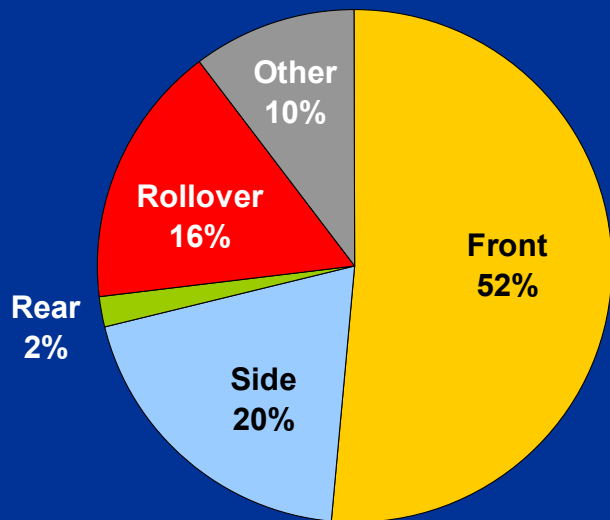


Vans

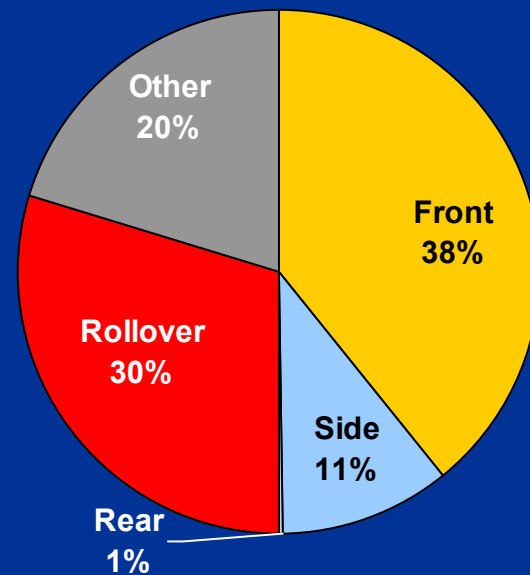


SUVs

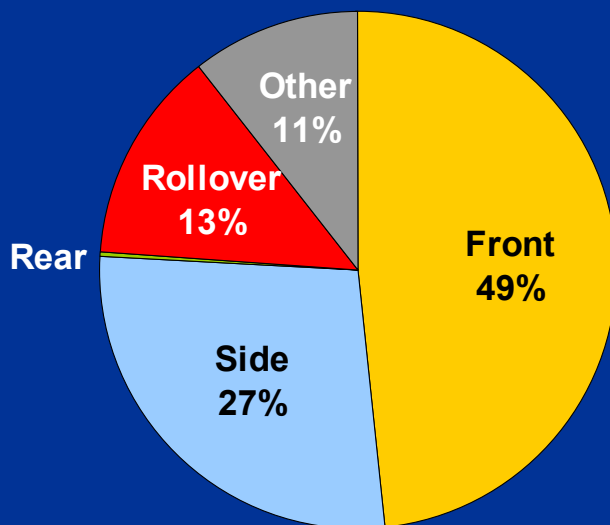
Occupant Fatalities by Type of Crash, 2001



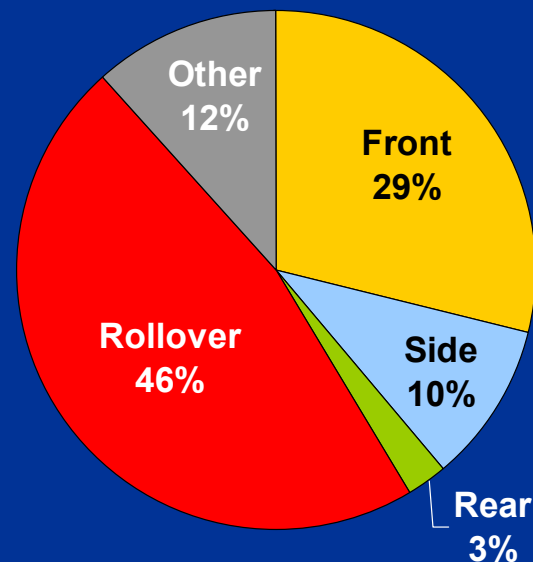
Passenger Cars



Pickups



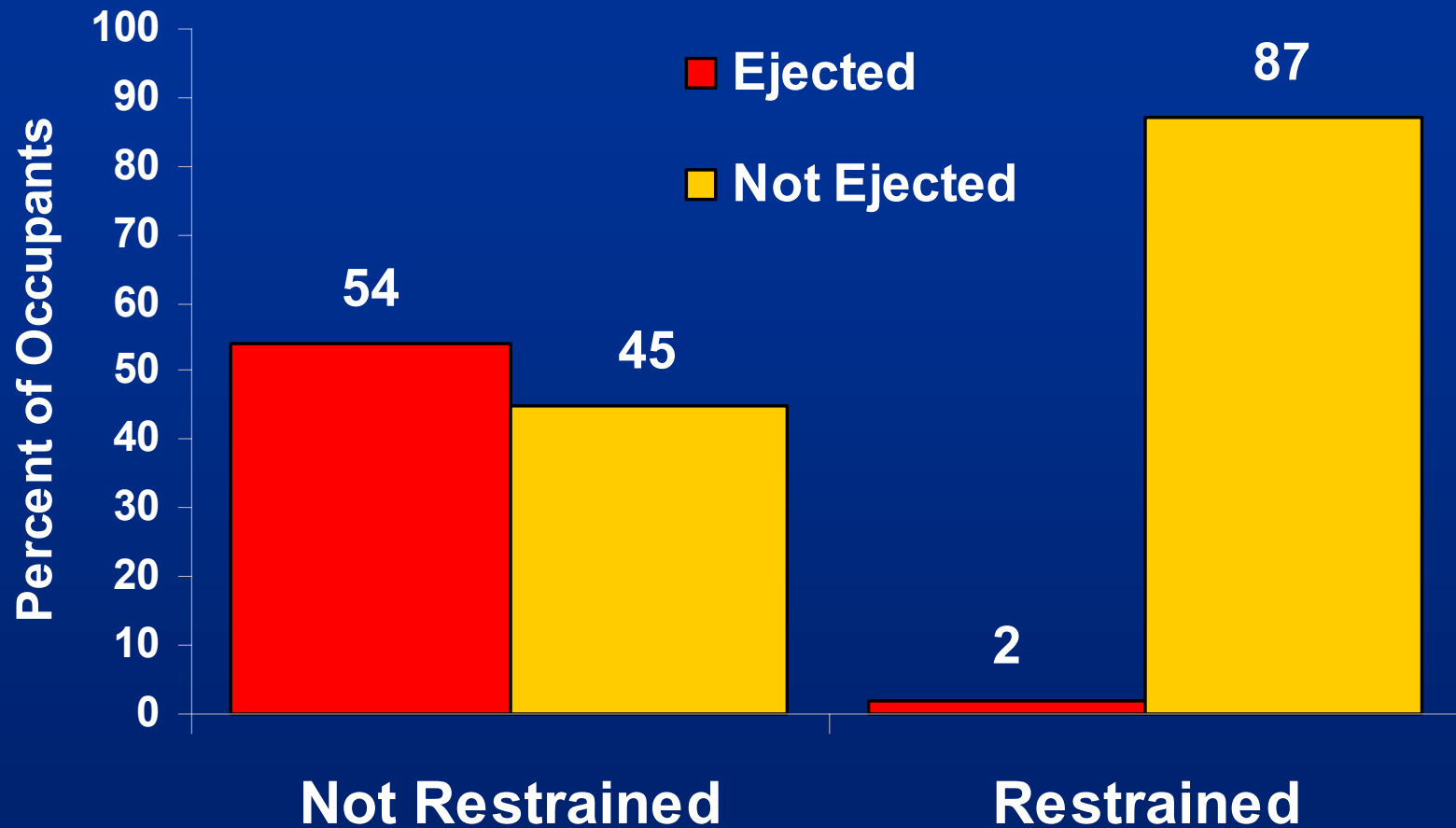
Vans



SUVs

Serious Injuries by Type of Crash, 2001

Occupant Restraint Use and Complete Ejection in Fatal Rollover



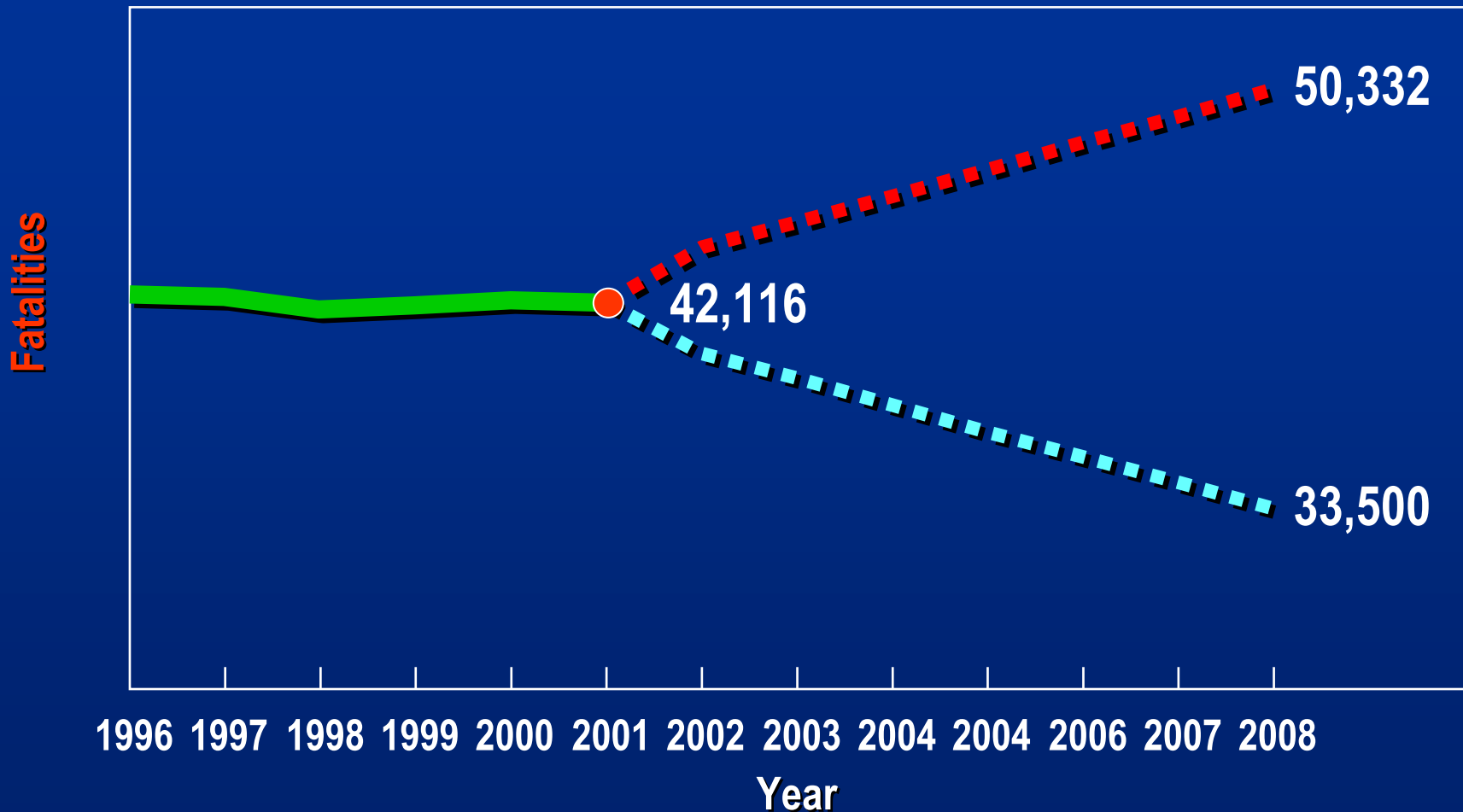
**AVI file for
DRF-Dynamic Rollover Fixture**



DRF_40

DRF_40

2008 Goal Is Challenging





People Saving People

www.nhtsa.dot.gov